





## **PAGER** Version 2

10,000

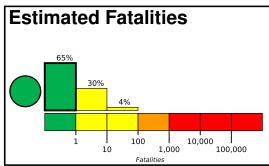
100,000

Created: 1 hour, 2 minutes after earthquake

1,000

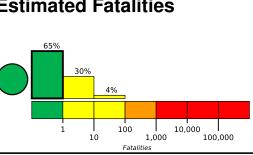
# M 4.1, 3km ENE of Westmorland, CA

Origin Time: 2020-10-01 01:10:25 UTC (Wed 18:10:25 local) Location: 33.0490° N 115.5922° W Depth: 10.9 km



and economic losses. There is a low likelihood of casualties and damage.





Green alert for shaking-related fatalities Estimated Economic Losses

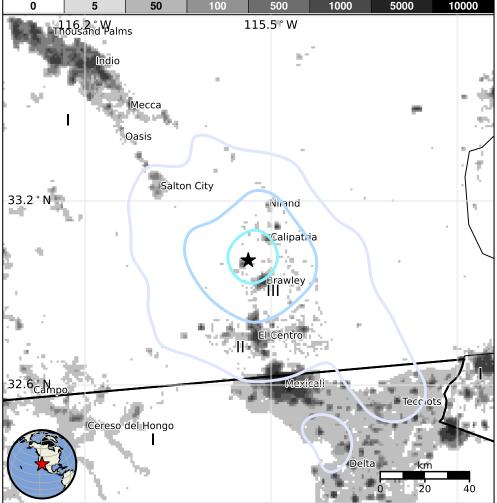
**Estimated Population Exposed to Earthquake Shaking** 

| ESTIMATED POPULATION<br>EXPOSURE (k=x1000) |                          | 1,573k   | 625k   | 20k   | 0        | 0        | 0           | 0          | 0        | 0        |
|--|--------------------------|----------|--------|-------|----------|----------|-------------|------------|----------|----------|
| ESTIMATED MODIFIED MERCALLI INTENSITY      |                          | I        | II-III | IV    | V        | VI       | VII         | VIII       | IX       | X+       |
| PERCEIVE                                   | SHAKING                  | Not felt | Weak   | Light | Moderate | Strong   | Very Strong | Severe     | Violent  | Extreme  |
| POTENTIAL                                  | Resistant<br>Structures  | None     | None   | None  | V. Light | Light    | Moderate    | Mod./Heavy | Heavy    | V. Heavy |
| DAMAGE                                     | Vulnerable<br>Structures | None     | None   | None  | Light    | Moderate | Mod./Heavy  | Heavy      | V. Heavy | V. Heavy |

<sup>\*</sup>Estimated exposure only includes population within the map area.

### Population Exposure

population per 1 sq. km from Landscan



**Structures** 

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are unreinforced brick masonry and reinforced masonry construction.

### **Historical Earthquakes**

| Date       | Dist. | Mag. | Max        | Shaking |
|------------|-------|------|------------|---------|
| (UTC)      | (km)  |      | MMI(#)     | Deaths  |
| 1991-06-28 | 259   | 5.6  | VI(1,267k) | 1       |
| 1992-06-28 | 153   | 7.3  | VIII(23k)  | 1       |
| 1971-02-09 | 299   | 6.6  | IX(21k)    | 65      |

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

### **Selected City Exposure**

| from GeoNames.org |                       |            |  |  |  |
|-------------------|-----------------------|------------|--|--|--|
| MMI               | City                  | Population |  |  |  |
| IV                | Westmorland           | 2k         |  |  |  |
| IV                | Calipatria            | 8k         |  |  |  |
| IV                | Brawley               | 25k        |  |  |  |
| Ш                 | Niland                | 1k         |  |  |  |
| Ш                 | Imperial              | 15k        |  |  |  |
| II                | El Centro             | 43k        |  |  |  |
| I                 | Tecate                | 58k        |  |  |  |
| I                 | Mexicali              | 597k       |  |  |  |
| I                 | San Luis Rio Colorado | 139k       |  |  |  |
| I                 | Yuma                  | 93k        |  |  |  |
| 1                 | Indio                 | 76k        |  |  |  |

bold cities appear on map.

(k = x1000)

Limitations of input data, shaking estimates, and loss models may add uncertainty. https://earthquake.usgs.gov/earthquakes/eventpage/ci39641880#pager

PAGER content is automatically generated, and only considers losses due to structural damage.

Event ID: ci39641880